

SIMULTANEOUS VIBRATIONS OF SHAFTS, DISCS, AND
ROTOR BLADES OF TURBO-COMPRESSORS, AND CRITICAL
ROTATIVE SPEEDS CONCERNED, BY D. V. KHRONIN.

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TEKH, NO 1, 1958, PP 171-178.

NLL M.4772

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Shape of Bodies With Minimum Wave Drag, by
G. I. Kostychev, 7 pp.

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pp 9-15. 9071192

3LA 60-23557
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Navy Tr 3826
APL T1007

Sci - Phys
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Universal Method of Calculating Thermodynamic
Characteristics of Rocket Fuels, by V. Ye.
Aleksanov, A. P. Tishin, 21 pp.

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FID-XR-61-45

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Calculation of Gas Ejector, by I. I. Kalnykov,
19 pp.

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~~FEB-TE-62-45~~

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Some Results of Testing High Speed Centrifugal
Pumps, by B. V. Ovsyannikov, V. F. Ghebayevskiy,
13 pp.

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Characteristics of the Simplest Supersonic Diffuser
(Reverse Laval Jet), by B. S. Vinogradov, 11 pp.

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JPRS: R-531-D

Sci - Geophys

19 Sep 60

Investigating an Electroinduction Discharge
Gage for Measuring the Fast-Changing Discharge
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RUSSIAN, per, Izv Vyddh Ucheb Zaved, Setiya
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*FTD-MT-62-7
(Machine translation)

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Selecting the Relative Value of a Critical Cross
Section of a Nozzle of a Nozzle of a Liquid
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*JPRS for NASA

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Investigation of the Normal Flame Propagation Rate
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*FTD-TT-65-2020

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Jan 66

The Variational Principle of the Maximum Flow
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V. N. Ershov.

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NII Ref. 5207 1963 (1,031)
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Nov 63

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Flow On Gas Through Porous Metal Walls, by
Yu. V. Il'in, 14 pp.

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FED MEL-1166/1

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171,847

25 Oct 61

4-18-22

FTD(TDBDR-1)

For D/C

BT67-17-470F

AUTHORS: Dumov, V. I.; Peshkin, M. A.

SOURCE: Izvestiya Vysshikh Uchebnykh Zavedeniy.

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ENGLISH TITLE: State Committee on Aviation Tech, V-72

Calculation of Orthotropic Conical Shell for
Arbitrary Internal Load, Using the Method of V. S.
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Analysis of Operation of Simplest Ramjet
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A CONE (K Raschetu Obtekaniya Konisa). [1961]
[9]p. (foreign text included) 1 ref.
Available on loan from SLA 62-14014

[Rough draft] trans. of Izvestiya Vysshikh Uchebnykh
Zavedenii. Aviatsonnaya Tekhnika (USSR) 1959,
no. 2, p. 144-146.

DESCRIPTORS: *Conical bodies, Hypersonics,
*Hypersonic flow, Velocity, Numerical analysis,
Differential equations.

The steady-state axially symmetric flow around an
infinite cone is considered. The speed of flow is
assumed to be hypersonic. The approximate equation
for the velocity potential is used to obtain a solution
in closed form.
(Mechanics--Aerodynamics, TT, v. 7, no. 7)

62-14014

I. Sidorov, O. P.

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Office of Technical Services

On Two Features of Cavitation Qualities
of a Centrifugal Pump With Feather Type Vane
and Partial Discharge of Liquid, by V. I.
Dumov, M. A. Peshkin, 8 pp.

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FED MCL-1158/1 + 2

SLA 617 28375

169.304

Sci - Aero

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The Problem of Stress in the Fir-Tree Root
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OT 7163
Engl. Elect. 700

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On the Theory of an Annular Wing in Supersonic Flow,
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Sci - Phys

Apr 61

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On the Joint Operation of the Rotor and the Bladed
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Approximate Method of Calculating the Aerodynamic
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*ATIC

Sci - Aero

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On the Mechanism of Cavitation in
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FTD-MCL-1156/1

Sci - Aero

Aug 61

164, 969

Rotating Stall in an Axial Compressor Stage,
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Tekh, No 3, 1959, pp 64-71.

TIL 4256

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Sci - Engr

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The Experimental Investigation of the Subsonic
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Investigation of Basic Characteristics of
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Sci Phys
May 62

Condensation Shocks in ~~3~~Supersonic Nozzles,
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pp 119-129.

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pp 152-154. 9670598

FTD-MEL-1157/1

Sci - Aero, Misc

164,968

Aug 61

New Method of Calculating the Vertical Rate of Climb
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ATTN MCL 745/1-2

Sci - Aero
Jun 61

155,517

On the Scientific Scene - Conference on
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V. K. Zolotukhin, 17 pp.

RUSSIAN, per, Iz Vysshikh Ucheb Zaved,
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9671548

FTD MCL-1155/1

Sci - Aero; Misc

173.967

(NY-3949)

Supersonic Flow Past the Angle of Incidence of
"Delta" Wings and Elliptic Cones With Subsonic
Leading Edges, by N. P. Korobeynikov, 16 pp.

RUSSIAN, per, Is Vysokikh Ucheb Zaved, Aviat Tekh,
No 1, 1960, pp 28-34.

JPRS 7479

Sci - Phys

Feb 61

139,262

(NY-3949)

Equilibrium Temperature of Slender Bodies in a
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JPRS 7480

Sci - Engr

Feb 68

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(NY-3449)

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Characteristics of Construction on the Flying
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Eng Tekh, No No 1, 1960, pp 52-62.

JPRS 7481

Sci - Phys

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(NY-3549)

The Determination of the Thermal Stresses in a
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Sci - Phys

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JPRS 7482

APC 90

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(NY-3049)

Certain Regularities in the Process of Heat and Mass
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JPRS 7483

Sci - Phys

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(NY-3949)

Calculation of the Simplest Combustion Chamber,
by K. P. Vlasov, 14 pp.

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JPRS 7484

Sci - Phys

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V. I. Figurovskiy, 11 pp.

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Sci - Engr
Jul 61

(NY 4826)

Motion of a Point With Variable Mass Along an
Optical Tracking Line, by I. P. Vereshchagin,
15 pp.

RUSSIAN, per, Iz Vysshykh Ucheb Zaved, Aviat Tekh,
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JPRS 7167

Sci - Phys

134,431

Dec 60

Jet Atomization With Centrifugal Nozzles, by
S. M. Il'yashenko, 15 pp.

RUSSIAN, per, Iz VUZ, Aviats Tekhnika, No 2,
1960, pp 88-98.

SLA 60-18763

203,536

Sci

Jun 62

Figurovskii, V. I.
CALCULATION OF THE HEATING OF TWO-LAYER
PLATES, tr. by Joy B. Gazley. 15 Feb 61 [12]p. 2 refs.
Rand T-140.
Order from OTS or SLA \$1.60

61-23650

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii.
Aviatsionnaya Tekhnika (USSR) 1960, no. 2 [p. 99-104].

DESCRIPTORS: *Laminates, *Heating, Measurement.

Equations are obtained that may be used for the calculation of the heating of a heat insulated plate under any law of change of surface temperature with time. It is possible to take into account the change in the heat transfer coefficient with time and if necessary the physical heat properties of the materials.

(Physics--Thermodynamics, TT, v. 6, no. 8)

61-23650

- I. Figurovskii, V. I.
- II. Rand T-140
- III. Rand Corp., Santa Monica, Calif.
- IV. Contract AF 49(638)700

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Office of Technical Services

Stability of an Elastic Band in a Gas Flow by
R. Ye. Lamber, 15 pp.

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Tekh, No 3, 1960, pp 12-15. 9689149

FED-TR-63-754

Sci-Aero
Nov 63

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Approximate Modeling of Wing Flutter in a
Hydro-Pan, by D. A. Mnshtakov, 10 pp.

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Tekh, No 3, 1960, pp 16-21. 9689149

FTD-TT-63-754

Sci-Aero
Nov 67

243,435

Heat Transfer in the Neighborhood of the
Blunt Leading Edge of a Cylindrical Wing
During Slip, by A. A. Yarkho,
RUSSIAN, per, Izv VUZ Ser Aviats Tekhn.
No 3, 1960, pp 22-27.
NASA TT F-10,218

Sci-Phys
Aug 66

309,639

Il'yashenko, S. M.
JET ATOMIZATION BY CENTRIFUGAL NOZZLES, II.
LOCAL FUEL CONCENTRATION IN NON-VAPORIZ-
ING JETS [AND] VARIATION OF AXIAL FUEL CON-
CENTRATION AT INCREASING DISTANCES FROM
THE NOZZLE SECTION. [1961] 15p. 7 refs.
Order from LC or SLA ml\$2.40, ph\$3.30 61-10398

Trans. of Izvestiya Vyshtukh Uchebnykh Zavedeniy.
Aviatsionnaya Tekhnika (USSR) 1960, no. 3, p. 57-64.

The local fuel concentration in nonvaporizing jets and
the variation of axial fuel concentration at increasing
distances from the nozzle section are analyzed. (See
also 60-18763)

(Engineering-Aeronautical, TT, v. 5, no. 11)

61-10398

1. Fuel nozzles--Design
2. Atomization--Equipment
3. Title: Centrifugal nozzles
- I. Il'yashenko, S. M.
- II. Title: Local...
- III. Title: Variation...

158895

Office of Technical Services

Calculating the Temperature Fields in an
Insufficiently Heated Liquid Upon Boiling
Under Conditions of Free Convection, by
I. A. Latyshev, 9 pp.

RUSSIAN, per, Iz Vysshikh Ucheb Zaved,
Aviats Tekh, No 3, 1960, pp 74-79.
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FTD-TT-61-151

Sci - Phys

176,111

14 Dec 61

Popov, N. N.
ON MIXING OF GAS STREAMS. [1962] [17]p. 2 refs.
Order from OTS or SLA \$1.60 62-18102

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii.
Aviatsionnaya Tekhnika (USSR) 1960, no. 3, p. 80-86.

DESCRIPTORS: *Jet mixing flow, Temperature,
Velocity, Gases, Compressible flow.

(Mechanics--Aerodynamics, TT, v. 9, no. 8)

62-18102

I. Popov, N. N.

Office of Technical Services

On One Method of Selecting the Parameters of
the Dampers of Angular Motions of an Aircraft,
by N. P. Kolpakova, S. I. Rybnikov, 5 pp.

RUSSIAN, per, Iz Vysshykh Ucheb Zaved, Aviats
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FTD MCL-1099/1

Sci - Aero

5 Sep 61

165,732

The Effect of the Radial Clearance on the Operation
of Centropetal Gas Turbine, by A. P. Tunakov, 16 pp.

RUSSIAN, per, Iz Vysshikh Ucheb Zaved, Aviatsionnaya Tekhnika
Tekh, No 4, 1960, 9870991

*ATIC MCL-1041/1

Sci - 3
May 61

C-958

Solution of the Extreme Problem of the Movement
of a Point Having Variable Mass, by
I. F. Vereshchagin, 19 pp.

RUSSIAN, per, Iz Vysishikh Ucheb Zaved, Aviat
Tekh, No 4, 1960, pp 18-30. 9673562

FTD-TT-61-189

Sci - Aero

186,241

2 Mar 62

A Theoretical Example of a Subsonic Flow
Past a Profile With a Local Supersonic
Region Terminating in a Normal Shock, by
F. I. Frankl¹, I. N. Lenin, 16 pp.

RUSSIAN, per, Iz Vysishikh Ucheb Zaved,
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FTD-TT-61-320

Sci - Phys

186, 194

2 Mar 62

Forced Oscillations of Cylindrical Shells by
R. L. Malkin, 15 pp.

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Tekh, No 4, 1960, pp 51-60. 9689144

FTD-TT-63-742

Sci-Phys
Nov 63

243,598

The Stability of the Momentless State of
Biaxially Anisotropic Shells, by
A. V. Sachenkov, V. G. Vysotskov, 36 pp

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Tekh, No 4, 1960, pp 61-71. 9072120

FTD FT-61-133

Sci - Phys

180, 252

23 Jan 62

Evaporation and Combustion of a Single-
Component Fuel in a Chamber of a Liquid
Engine ZHRD, by S. M. Il'yashenko, 18 pp.

RUSSIAN, per, Iz Vysshikh Ucheb Zaved,
Aviats Tekh, No 4, 1960, pp 72-82.
9663478

FID MCL-1168/1

Sci - Fuels

24 Oct 61

171, 826

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Vol I, IV, 1963

Effect of the Radial Clearance on the Operation
of a Centripetal Gas Turbine, by A. P.
Tunakov, 16 pp.

RUSSIAN, per, Is Vysshikh Ucheb, Zaved
Aviat Tekh, No 4, 1960, pp 83-92. 9670991

FTD MCL-1041/ 1 +2

Sci - Engr

Sep 61

169,300

Galyullin, A. S.
CERTAIN QUESTIONS ON THE FUNDAMENTAL
PROBLEM OF EXTERIOR BALLISTICS OF UN-
GUIDED ROCKETS. [1961] [16p. 7 refs.
Order from OTS or SIA \$1.60

61-16083

Trans. of Izvestiya Vysshikh Uchebnykh Zavedeniy,
Aviatsionnaya Tekhnika (USSR) 1960, no. 4,
p. 117-125.

DESCRIPTORS: *Exterior ballistics, *Rockets,
Stability, Mathematical analysis.

This is an excellent summary primarily of other
people's results of studies on the stability and other
dynamic properties of unguided ballistic rockets. An
excellent bibliography is supplied in the reference list.
It is interesting to note that a good feeling for the
effect of various constraints or control laws can be ob-
tained from perusing the simple examples exhibited in
this paper. (Translator)
(Engineering--Missiles, TT, v. 6, no. 3) (OUT)

61-16083

I. Galyullin, A. S.

175225

Office of Technical Services

Kolchanov, R. A.
CALCULATION OF REQUIRED THRUST TAKING
INTO ACCOUNT COMPRESSIBILITY, tr. by G. M.
Weber. 14 Apr 61 [11]p. 2 refs. Rand T-139.
Order from OTS or SLA \$1.60 61-19806

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii.
Aviatsionnaya Tekhnika (USSR) 1960, no. 4, p. 126-131.

DESCRIPTORS: *Supersonic flight, *Supersonic planes,
Supersonics, *Thrust, *Compressible flow.

The method proposed by N. E. Zhukovskii for the
graphical construction of a force triangle, the sides of
which are the coefficients of weight C_w , total aerody-
namic force C_R , and required thrust C_T is modified and
made suitable for use for supersonic speeds. To illus-
trate the great potentiality of the graphical method of
calculation it is shown to be adaptable to the calculation
of unsteady motion of an aircraft.

61-19806

- I. Kolchanov, R. A.
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